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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,749	12/21/2001	Rudiger Hauschild	71980/56667	8823
21874	7590	03/28/2005	EXAMINER	
EDWARDS & ANGELL, LLP			ROSS, DANA	
P.O. BOX 55874				
BOSTON, MA 02205			ART UNIT	PAPER NUMBER
			3722	
DATE MAILED: 03/28/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

SN

Office Action Summary	Application No. 10/019,749	Applicant(s) HAUSCHILD ET AL.	
	Examiner Dana Ross	Art Unit 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-18, 20-28 and 30 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 11-18, 20-28 and 30 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The rejection of the claims under 35 USC 112 is withdrawn due to Applicant's amendment of 28 February 2005.

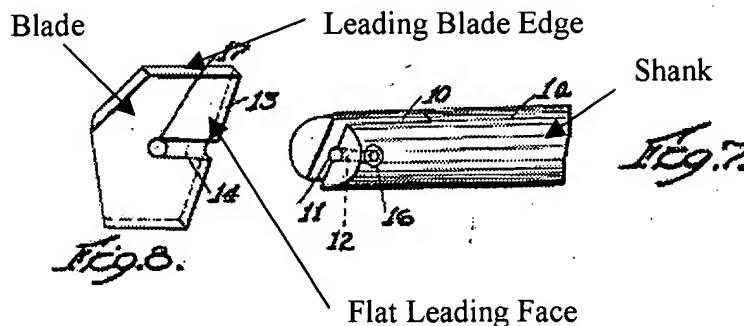
Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11 – 15, 18, 21 – 25 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat. No. 2,621,548 (Williams).

Regarding claims 11, 12 and 18, Williams discloses a shank-end milling-type tool comprising a shank portion (1) having a longitudinal axis, a first end that can be detachably connected to a drive device and second end with a groove-shaped recess (2) extending in the longitudinal direction, a blade (4, 4a, 4b, 19 and 27) in the groove and fixedly attached to the shank having a leading flat face in the direction of use wherein the blade is made of steel and is provided with a wear resistant blade edge on the leading face (Col. 2, lines 43 – 53). Williams also discloses the blade in the form of a flat bar with a leading blade edge (see fig. 8 below) with at least a portion of the leading edge substantially parallel to the longitudinal axis of the flat bar.



Williams discloses in figures 2, 2a, 3b, 4, 5, 6, 8 and 9 that the blade is in the form of a flat bar.

Regarding claims 13 – 15, Williams discloses in figures 2a and 2b that the leading and trailing edges are rounded and cut-corner designs.

Regarding claims 21 – 25 and 28, Williams inherently teaches the method steps as set forth in the above rejections.

However, Williams fails to explicitly state the thickness of the blades used in the device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the thickness of the inserts to any size since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, Applicant has provided no basis for why this particularly wide range of insert thickness (0.1 mm to 5.00 mm) is crucial to the workability of the device.

4. Claims 16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of US Pat. No. 5,222,842 (Schweikert et al.)

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Williams discloses all of the elements as set forth in the above rejections, however, Williams fails to disclose the blade comprises a curved surface having a convex face, parallel to the longitudinal axis, pointing toward a direction of rotation during use.

Regarding claim 16, Schweikert et al. discloses a milling tool similar to the instant invention as well as Williams, comprising a shank-end tool with a blade comprising a curved surface having a convex face, parallel to the longitudinal axis, pointing toward a direction of rotation during use (see figure 6).

Regarding claim 26, Schweikert et al. inherently discloses the method steps as set forth in the above rejection since Applicant has set forth no further limiting method steps or article limitations.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the blade of Williams to include the curved surface of Schweikert et al. since Schweikert et al. teaches the use of this surface in order to overcome vibration and high wear problems (Col. 1, lines 29 – 31 and 36 – 38).

5. Claims 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of US Pat. No. 5,597,269 (Ogawa).

Williams discloses all of the elements as set forth in the above rejections, however, Williams fails to disclose the blade comprises surfaces that operate in a “fan-like” action.

Regarding claim 17, Ogawa discloses a cutting tool similar to the instant invention wherein the blade includes a shovel-like arrangement with blades that are sloped with an angle relative to the longitudinal axis to produce a fan-like action.

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Regarding claim 27, Ogawa inherently discloses the method steps as set forth in the above rejection since Applicant has set forth no further limiting method steps or article limitations.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the blade of Williams to include the shovel-like blade of Ogawa since Ogawa discloses this arrangement on the blade in order to reduce cutting friction and prevent the blade edge from being burned (Col. 1, lines 34 – 67).

6. Claims 20 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams in view of Freitag.

Williams discloses all of the elements as set forth in the above rejections, however, Williams fails to disclose the shank comprises a hollow cylindrical body at least at the second end.

Freitag discloses a similar to the instant invention for cutting through a Styrofoam workpiece comprising a hollow cylindrical shank (40). See figure 3.

Regarding claim 30, Freitag inherently discloses the method steps as set forth in the above rejection since Applicant has set forth no further limiting method steps or article limitations.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the shank of Williams to include the hollow shank of Freitag since Freitag inherently teaches this void in order to experience a weight reduction of the device.

Response to Arguments

7. Applicant's arguments filed 28 February 2005 have been fully considered but they are not persuasive.

8. Applicant asserts that "The side edges of William's blades are not leading edges". It is not clear which "side edge" Applicant is referring to in this statement. However, Examiner notes that the rotary tool as taught by Williams includes leading face as discussed and shown in the above rejection. The leading face has on the side, leading edges, as is shown in the above claim 1 rejection. It is noted that the leading face of Applicant's invention is located structurally in the same location as Williams. It is further noted that the side edges of Applicant's inventions (see Applicant's inventions figures 2-6 for example and William's inventions figures 2, 2a, 2b for example) are the same side edges of Williams, both being leading edges.

There is still no structural limitations of Applicant's invention claimed that overcome the invention of Williams. It is noted that Applicant asserts the intended use of the Applicant's invention for knocking particles of sand from a sand mold, however the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.

Applicant asserts that the Williams tool has a working edge that is a conventional cutting edge whereas in Applicant's invention the working edge is a non-cutting edge. Examiner holds that this is functional language. It is further noted that this limitation does not place any limitations on the actual structure of Applicant's invention that is not found in Williams' invention.

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Furthermore, there is nothing limiting in the structure of Williams which would preclude “no cutting” be performed with the blade.

Applicant asserts that Schweikert et al., Ogawa and Freitag fail to teach or suggest that the working edge of the tool be a non-cutting edge. Examiner notes that Schweikert et al., Ogawa and Freitag each teach that it would be obvious and is well known in the art to modify the shape of Williams to obtain the various shapes claimed by applicant which, Examiner notes, Applicant places no criticality on in the disclosure.

It is not clear what Applicant is asserting as to the classification of the Application. Applicant discusses the classification system for tools such as Williams. However, the claimed structural limitations of Applicant’s invention are so broad that there are many areas that the claimed limitations can be found and are not just limited to the classification of Williams. Applicant is referred to, for example, US Pat. No. 3,261,095 (Nelson) and US Pat. No. 4,924,444 (Castellanos), which both teach a blade (with no cutting) and shaft similar to Applicant’s claimed blade and shaft and are both found in different patent classifications.

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Conclusion

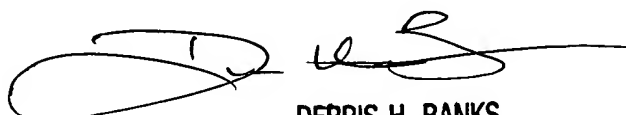
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Ross whose telephone number is 571-272-4480. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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